Claims:

1. A conveyor for transporting load carriers, in particular standardized pallets, skids or containers, said conveyor comprising:

frame parts which stand on the floor and on which are arranged load-bearing members which are spaced apart parallel to one another and are intended for accommodating drivable load-bearing elements which form longitudinally running load-bearing tracks for the load carriers on the load-bearing elements; and

modular-construction conveying units, each load-bearing element of at least two laterally spaced-apart load-bearing members of each conveyor unit comprising an endlessly circulating load-bearing belt, which bears the load carriers and, for its part, is supported on load-bearing rollers which are mounted on the load-bearing members, with a small distance between their centers, and which circulate in the conveying direction.

2. The conveyors as claimed in claim 1, characterized in that the load-bearing belts are designed as toothed belts, of which the teeth arranged on the underside, for the purpose of transmitting the driving torque, engage in the correspondingly designed teeth of at least one driving gearwheel.

3. The conveyor as claimed in claim 1, characterized in that the load-bearing members are formed from a rolled steel profile or angled sheet metal.

4. The conveyor as claimed in claim 1, characterized in that the load-bearing members are formed from an extruded aluminum profile.

5. The conveyor as claimed in claim 1, characterized in that each load-bearing member is made up of a load-bearing profile and a bar, which is positioned in an exchangeable manner on the load-bearing profile and in which the load-bearing rollers for the load-bearing belt are mounted.

6. The conveyor as claimed in claim 5, characterized in that the load-bearing profile is open at least on one of its longitudinal sides.

7. The conveyor as claimed in claim 6, characterized in that the load-bearing profile of each load-bearing member is cross-sectionally C-shaped and the bar, which can be positioned on the load-bearing profile, is of cross-sectionally U-shaped design, the load-bearing rollers for the load-bearing belt being mounted in the legs of the U-profile of the bar.

8. The conveyor as claimed in claim 7, characterized in that the load-bearing profile of each load-bearing member is of cross-sectionally C-shaped design, and fastened on the load-bearing profile are two vertical metal plates which are spaced apart parallel to one another in the longitudinal direction and between which the load-bearing rollers for the load-bearing belts are mounted.

9. The conveyor as claimed in claim 8, characterized in that at least one of the C-shaped load-bearing profiles of the load-bearing members is installed on the frame parts with the opening in the outward direction and the cavity within the C-shaped load-bearing profile, it being possible for said cavity to be closed by a covering plate, is configured as a cable duct and/or for accommodating electrical or electronic components.

10. The conveyor as claimed in claim 7, characterized in that the U-shaped bar can be positioned on the load-bearing profile, and screwed to the latter, with the opening in the downward direction, and the load-bearing rollers have their running surfaces for the load-bearing belt projecting upward through cutouts provided in the bar.

11. The conveyor as claimed in claim 7, characterized in that the load-bearing profile of each load-bearing member is provided with T-grooves which run in the longitudinal direction and are provided for fastening frame parts, drive parts, initiators, control means and/or the U-shaped bar.

12. The conveyor as claimed in claim 11, characterized in that in each case at least two load-bearing members can be joined together with the frame parts and supporting feet to form one of a number of autonomous conveyor units of the same construction, in which are integrated in each case at least one drive and control elements for the load-bearing elements of this one conveyor unit, it being possible for these to be linked for control purposes to further drives and control means of this or adjacent conveyor units.

13. The conveyor as claimed in claim 1, characterized in that in each case at least two load-bearing members can be joined together with the frame parts and supporting feet to form one of a number of autonomous conveyor units of the same construction, in which are integrated in each case at least one drive and control elements for the load-bearing elements of this one conveyor unit, it being possible for these to be linked for control purposes to further drives and control means of this or adjacent conveyor units.

14. The conveyor as claimed in claim 13, characterized in that it is possible to synchronize the accelerating and braking processes between preceding and following conveyor units.

15. The conveyor as claimed in claim 1, characterized in that, in order to form three load-bearing tracks, each conveyor unit contains three loading-bearing members with load-bearing elements, of which at least the two outer load-bearing elements have load-bearing belts supported on load-bearing rollers.

16. The conveyor as claimed in claim 15, characterized in that, of three load-bearing tracks, only the load-bearing elements of the central load-bearing track can be driven.

17. The conveyor as claimed in claim 1, characterized in that each autonomous conveyor unit is slightly larger, in respect of its length and width measurements, than the dimensions of an individual load carrier which is to be transported.

18. The conveyor as claimed in claim 1, characterized in that the drive for a load-bearing element comprises a prefabricated drive station which can be screwed onto the load-bearing profile in the end region and has an integrated motor, gear mechanism and drive chain or belt and a driving gearwheel, which is mounted in a floating manner, about which the load-bearing belt is deflected, and the top of which is arranged in the load-bearing plane of the load-bearing rollers.

19. The conveyor as claimed in claim 18, characterized in that the motor and the gear mechanism are flanged directly onto the driving gearwheel, which is mounted in a floating manner.

20. The conveyor as claimed in claim 18, characterized in that the driving wheel is larger than the load-bearing rollers, and a smaller-diameter guard roller is arranged between the driving gearwheel and the directly adjacent load-bearing roller and/or the driving or deflecting wheel of the adjacent conveyor unit.

21. The conveyor as claimed in claim 20, characterized in that each load-bearing member is made up of a load-bearing profile and a bar, which is positioned in an exchangeable manner on the load-bearing profile and in which the load-bearing rollers for the load-bearing belt are mounted, wherein the load-bearing belt can be tensioned by displacement of the bar relative to the driving gearwheel.

22. The conveyor as claimed in claim 20, characterized in that the load-bearing belt is tensioned by a tensioning roller provided in the bottom strand.

23. The conveyor as claimed in claim 1, characterized in that each load-bearing element is assigned a dedicated drive station with motor, and the motors of all the drive stations of a conveyor unit are synchronized with one another via an electronic shaft.

24. The conveyor as claimed in claim 1, characterized in that at least two load-bearing elements of a conveyor unit are each assigned a dedicated drive station with motor, and the drive stations can be activated differently in order to achieve a differential speed for the load-bearing elements.

25. The conveyor as claimed in claim 1, characterized in that at least two load-bearing elements of a conveyor unit are driven via a common motor, and the driving wheels of the load-bearing elements are connected to one another via a mechanical shaft.

26. The conveyor as claimed in claim 1, characterized in that the load-bearing belt comprises a toothed belt, said load-bearing belt having on its underside, alongside regions

which are toothed in order to drive the load-bearing belt, smooth regions which rest on the load-bearing rollers in order to bear the load resting on the load-bearing belt.

27. The conveyor as claimed in claim 26, characterized in that the toothed region is provided with a standard toothing formation.

28. The conveyor as claimed in claim 26, characterized in that the toothed region is provided with a special toothing formation in which the tooth widths are larger than the tooth gaps.

29. The conveyor as claimed in claim 26, characterized in that the toothed regions of the load-bearing belt, which is designed as a toothed belt, are accommodated in circumferentially running grooves of the driving wheels and/or load-bearing rollers.

30. The conveyor as claimed in claim 1, characterized in that the load-bearing belt is provided with reinforcements which increase the tensile strength.

31. The conveyor as claimed in claim 30, characterized in that the reinforcements consist of embedded steel wire, Kevlar material or woven fabric made of such materials or other tension-resistant materials.

32. The conveyor as claimed in claim 1, characterized in that the load-bearing belt is provided with a traction-increasing top side.

33. The conveyor as claimed in claim 32, characterized in that the top side of the load-bearing belt is provided with a profile in the manner of a vehicle tire.

34. The conveyor as claimed in claim 33, characterized in that the profile is configured such that the traction is as high as possible in the longitudinal direction and as low as possible in the transverse direction.

35. The conveyor as claimed in claim 33, characterized in that the profile is designed to be arrow-shaped, half-moon-shaped or interrupted or rectilinear throughout.

36. The conveyor as claimed in claim 1, characterized in that the load-bearing rollers and/or the driving gearwheels are designed with flanged wheels for guiding the load-bearing belt and/or the load carrier.

37. The conveyor as claimed in claim 1, characterized in that the driving gearwheels are of convex, trapezoidal or convex-cylindrical design.

38. The conveyor as claimed in claim 1, characterized in that the modular-constructed conveying units, completely preassembled and subjected to final testing, can be put together to form the conveyor at the use location.

39. The conveyor as claimed in claim 1, characterized in that each load-bearing member is made up of a load-bearing profile and a bar, which is positioned in an exchangeable manner on the load-bearing profile and in which the load-bearing rollers for the load-bearing belt are mounted, wherein the bars, in which the load-bearing rollers for the load-bearing belt are mounted, and the load-bearing profiles can be shortened, with the result that it is possible to vary the length of the conveying units.

40. The conveyor as claimed in claim 1, characterized in that the load-bearing members of the conveyor units can be connected to one another at their mutually facing ends via metal plates with fastening bores provided at unit spacings.

41. The conveyor as claimed in claim 1, characterized in that each load-bearing member is made up of a load-bearing profile and a bar.

42. The conveyor as claimed in claim 41, characterized in that the load-bearing profile is open at least on one of its longitudinal sides.

43. The conveyor as claimed in claim 42, characterized in that the load-bearing profile of each load-bearing member is cross-sectionally C-shaped and the bar, which can be positioned on the load-bearing profile, is of cross-sectionally U-shaped design, the load-bearing rollers for the load-bearing belt being mounted in the legs of the U-profile of the bar.

44. The conveyor as claimed in claim 42, characterized in that the bar is positioned in an exchangeable manner on the load-bearing profile and in which the load-bearing rollers for the load-bearing belt are mounted, wherein the metal plates are cut out at the C-shaped openings of the load-bearing members.